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AUTHOR Long, Larry H.
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ABSTRACT

This paper relates frequency of interstate migration and the likelihood of a child's being enrolled in school at the modal grade for age, controlling for socioeconomic status of the family. The 1970 Census of Population obtained information on school enrollment and current grade, state of birth, residence in 1965, and residence in 1970. A measure of relative progress in school was obtained by adjusting a child's age back to October 1, 1969 and comparing with grade of enrollment. The probability of a child's being enrolled below the modal grade for age is highly correlated with the various measures of socioeconomic status and family stability. This measure of relative progress in school was cross-tabulated with frequency of interstate migration. This indicator understates the actual amount of interstate migration, for some children could have moved several times between birth and 1965 and between 1965 and 1970, but in each case only one move would have been counted. Frequent interstate migration is found to be associated with an increased likelihood of being enrolled below the modal grade for age among children whose parents are not college graduates. For children of college graduates frequent interstate migration is associated with a reduction of grade skipping. Interstate migration is most likely to be undertaken by well-educated persons whose children tend to do well in school, and for this reason children who have made frequent interstate moves are less likely to be behind in school than less mobile children. (Author/JM)

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DOES MIGRATION INTERFERE WITH CHILDREN'S PROGRESS IN SCHOOL?

by

Larry H. Long
Population Division
Bureau of the Census
Washington, D. C. 20233

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DOES MIGRATION INTERFERE WITH CHILDREN'S PROGRESS IN SCHOOL?

Abstract

Frequent interstate migration is found to be associated with an increased likelihood of being enrolled below the modal grade for age among children whose parents are not college graduates. For children of college graduates frequent interstate migration is associated with a reduction of grade skipping.

Interstate migration is most likely to be undertaken by well-educated persons whose children tend to do well in school, and for this reason children who have made frequent interstate moves are less likely to be behind in school than less mobile children. The overrepresentation of the highly educated among long-distance movers is offered as partial explanation of why growing communities tend to have children of above-average scholastic ability.

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DOES MIGRATION INTERFERE WITH CHILDREN'S PROGRESS IN SCHOOL?

Whether migration interferes with children's progress in school is a recurring question in popular family magazines (see the references to and discussion of this literature in Barrett and Noble, 1973) and in considerations of the benefits and costs of migration (Wolfle, 1971:151). Most of the evidence relating to this question has been impressionistic, and the few empirical studies which have been carried out often have methodological shortcomings (see the critique in Barrett and Noble, 1973) or have relied on small samples not representative of the population at large (e.g., users of moving companies).

Nor has there been any theory advanced to specify the conditions under which different types of migration might retard, advance, or have no effect on children's progress and performance in school. The lack of evidence on the mobility of children between schools and its effects has been noted by the Office of Education (1971:1 and 1973) and by Vance Packard (1972:252). The absence of cumulative findings on which theory might be based has been due in part to failure to consider the alternative types of migration (short-distance vs. long-distance, from rural areas to cities, from cities to suburbs, etc.), the frequency of migration, and the socioeconomic status of persons undertaking the different types of geographical mobility.

This paper relates frequency of interstate migration and the likelihood of a child's being enrolled in school at the modal grade for age, controlling for socioeconomic status of the family. Whether long-distance migration affects children's progress in school has important implications

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not only for families and children but for society as a whole. As will be demonstrated, there are important implications for educational institutions in all areas of the country gaining or losing population as a result of migration.

DATA AND METHODS

The 1970 Census of Population (taken as of April 1) obtained information on school enrollment and current grade, state of birth, residence in 1965, and residence in 1970. A measure of relative progress in school was obtained by adjusting a child's age back to October 1, 1969 and comparing with grade of enrollment, assuming that a six-year-old child should be in the first grade, a seven-year-old child in the second grade, etc. This procedure is similar to that developed by Nam for the 1960 census (see Folger and Nam, 1967) and used by subsequent researchers (Conlisk, 1969; Masters, 1969) and in Current Population Survey reports on characteristics of students (U. S. Bureau of the Census, 1972:51-52). The probability of a child's being enrolled below the modal grade for age is highly correlated with the various measures of socioeconomic status and family stability (Folger and Nam, 1967:52-57; U. S. Bureau of the Census, 1973a:291-302, 1973b:32-36, 1973c:120-287).

This measure of relative progress in school was cross-tabulated with frequency of interstate migration, noting that a child who lived outside his state of birth in 1965 and in still another state in 1970 presented evidence of a high degree of interstate migration (having lived in at least three different states). In contrast, a child living in his state of birth in 1965 and 1970 apparently lived in only one state. In between were children who on these three dates lived in two states. This indicator

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understates the actual amount of interstate migration, for some children could have moved several times between birth and 1965 and between 1965 and 1970, but in each case only one move would have been counted. Also, a child living outside his state of birth in 1965 but back in his state of birth in 1970 would be counted with only one interstate move instead of two.

TESTS OF HYPOTHESES

Based on a review of the literature, Barrett and Noble (1973:181) state that:

> Popular magazines, as well as scientific journals, suggest that a long distance move may affect children negatively. Often, parents are counseled to take special precautions or even to limit their moves to once in four or five years . . .

We will, accordingly, test the hypothesis that the greater the number of states that a school-age child has lived in, the greater is the likelihood of being enrolled below the modal grade for age.

The percent enrolled and, among the enrolled, the percent below, at, and above the modal grade for age is shown in Table 1 according to age of child, number of states lived in, and whether living with both parents. Not living with both parents is associated with an increased probability of a child's being enrolled below the modal grade (Folger and Nam, 1967:55).

Table 1 about here

At first glance, the data appear to contradict the hypothesis that frequent moving is associated with enrollment below the modal grade. In

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fact, precisely the opposite is shown to be the case. Column 3 demonstrates that the children who are least likely to be below the modal grade are those who show evidence of the greatest amount of interstate migration. In every comparison, the children who have lived in three or more states are less likely to be enrolled below the modal grade than children who have lived in only one or two states.

As an example, consider children 12 to 15 years old. These children should be in the 7th, 8th, 9th, and 10th grades and are old enough for the effects of frequent migration to have cumulated during their school years but are still too young to drop out of school. Among 12-to-15-year-olds who lived with both parents, 17.3 percent of those having lived in only one state are enrolled below the mode, while 16.9 percent of those having lived in two states are below the mode, and only 15.4 percent of those having lived in three or more states are below the mode. The same pattern holds for children at this age who did not live with both parents; the percent enrolled below the mode drops from 26.3 for those having lived in only one state to 20.7 for those who have lived in three or more states.

These differences may not seem great, but they are consistent and are in direct contradiction to what was hypothesized. Nevertheless, one should not reject the hypothesis stated previously. The data in Table 1 can be misleading because there are no controls for socioeconomic status of the family. Well-educated persons have the greatest propensity toward long-distance moving (see data in Long, 1973)--which means that they are overrepresented among interstate migrants. In addition, the well-educated are likely to have children who do well in school. Thus, it is possible

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that the better-than-expected performance of the children who have lived in three or more states can be accounted for entirely by the fact that they are most likely to be children of parents with better-than-average educational attainment.

For children living with both parents (the top panel of Table 1), an additional tabulation was made to control for father's educational attainment. This information is given in Table 2, which shows the percent of children enrolled below the mode in the top panel and the percent enrolled above the mode in the bottom panel.

Table 2 about here

Except for children of college graduates, the conventional hypothesis is consistently supported by the data in Table 2, for increasing frequency of interstate migration is associated with increasing likelihood of a child's being enrolled below the modal grade.

As an example, again consider the 12-to-15-year-olds. Among children at this age whose fathers had not completed high school, 24.3 percent of those having lived in only one state were below the mode, compared to 27.8 percent of those having lived in two states and 29.0 percent of those having lived in three or more states. Similarly, among 12-to-15-year-old children whose fathers had completed high school (but had gone no further) the percent below the mode increases from 12.3 to 18.0 with increasing frequency of move. Among children whose fathers had completed one to three years of college, the percent below the mode increases from 10.4 to 13.6 with increasing frequency of move. But for children whose fathers were college graduates, increasing frequency does not appear to be con-

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sistently associated with a greater likelihood of being enrolled below the mode.

Table 2 shows that not only does frequent interstate migration increase the likelihood that a child will be below the modal grade, but it decreases the likelihood that a child will skip a grade. In every case, the percent of children enrolled above the mode decreases with increasing frequency of interstate migration.

It is interesting to note in Table 2 that the percent of children below the mode demonstates much greater variability according to father's education than does the percent above the mode. The likelihood of being enrolled below the mode is consistently about three times as great for children whose fathers did not graduate from high school as for children whose fathers were college graduates. In contrast, the percent above the mode shows very little variation according to father's education, the children of college graduates being only a few percentage points more likely to be enrolled above the mode than children whose fathers failed to complete high school.

In every case, however, increasing education of the father is associated with an increased likelihood of a child's being enrolled above the mode. But it is important to note the ways in which these "advantages" of having a well-educated father can be partially nullified by frequent migration. Look first at children 8 to 11 years old enrolled above the mode. Among children of high school graduates, the percent enrolled above the mode is 15.9 for those who have lived in only one state--which is very nearly the same percent (15.6) above the mode for children with fathers having one to three years of college but who have

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lived in two states. Finally, this percent is very nearly the same as the percent (15.8) above the mode for children with fathers having four or more years of college but who had lived in three or more states. This pattern for children 8 to 11 years old also applies at ages 12 to 15 and 16 and 17.

The point here is that the children of college graduates who have lived in three states are no more likely to be above the mode than children whose fathers had one to three years of college but who lived in only two states and children whose fathers completed high school but who lived in just one state. In other words, increasing frequency of interstate migration could completely eliminate the "advantage" of having a father who was a college graduate insofar as skipping a grade is concerned. In this way, therefore, it appears that for children of college graduates the most important effects of frequent interstate migration may not be failure to make normal progress in school but a reduction in the likelihood of skipping a grade.

The differences in the percent below or above the modal grade according to frequency of interstate migration are relatively small but quite consistent. The size of the apparent effects of frequent migration on children's progress in school might be larger if more refined measures of these two variables were available. Except in rare circumstances, however, the effects of migration on children's progress in school are always likely to be small in relation to such other variables as family structure and socioeconomic status.

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IMPORTANCE OF FINDINGS FOR COMMUNITIES

Because migration tends to be a more important component of population change for local areas than natural increase (the excess of births over deaths), growing communities have a relatively high proportion of immigrants in their population. The preceding findings revealed that children of interstate migrants were, in the aggregate, less likely to be below the modal grade in school than other children because of the overrepresentation of the highly educated among long-distance migrants. It follows, therefore, that in growing communities the children of highly-educated parents will be overrepresented and as a result scores of scholastic ability will be higher in growing communities than elsewhere.

Data from the National Center for Health Statistics (1971a and 1971b) provide a test of this hypothesis. During the period 1963-65, the Wechsler Intelligence Scale for Children and the Wide Range Achievement Test were administered to a nationwide representative sample of children 6 to 11 years old. Scores on these tests were cross-tabulated against characteristics of the child (sex, race, region, etc.), his parents (education, income, etc.), and population change in the place of residence during the preceding decade (1950-60). "Place of residence" referred to the Primary Sampling Units (PSU's) from which households were selected for inclusion in the sample. PSU's represent either a single metropolitan area or group of contiguous nonmetropolitan counties.

The rate of population change for each PSU during the preceding decade was classified as being negative (loss of population), below average growth, average growth, or above average growth with respect to

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population change in the region to which the PSU belonged. Scores of IQ and reading and arithmetic achievement according to rate of population change are shown in Table 3.

Table 3 about here

The hypothesis is supported. Children in communities experiencing population loss consistently scored lowest in terms of IQ, while those in communities experiencing above average gain in population consistently scored highest. The children in declining communities tended to score around 98, while those in communities growing at above-average rates scored around 104--a difference of about four-tenths of a standard deviation. Similar differences prevail when one considers achievement test scores, with children in declining areas scoring lowest in both reading and arithmetic skills and children in areas experiencing above average gains scoring highest.

This explanation of the data in Table 3 is consistent with what is implied by Tables 1 and 2 and seems more plausible than a "community effects" explanation to the effect that growing communities have "healthy" economies while stable or declining areas do not. Research stemming from the Coleman report (Colemen, et al., 1966) tends to downplay the role of schools per se in influencing the intellectual development of children and to emphasize instead the characteristics of children and their families. The explanation offered here for the findings from Table 3 is in line with this research, for it stresses that these community differences are likely to arise from the selectivity of migration, namely, the overrepresentation of the highly educated among migrants. It is, of course, likely that

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other factors are involved, but it should be noted that the causal mechanisms have never been specified whereby the state of the community's economy or any other community-wide variable by itself brings about an influence on children's test scores.

The conclusion, therefore, is that even though frequent long-distance migration may interfere with children's progress in school, areas with high rates of immigration tend to have children of above-average scholastic ability presumably because of the overrepresentation of highly-educated parents among migrants.

There are obvious **daveats** in interpreting such statistics, and these should be clearly recognized. Extremely rapid population growth is almost certain to be associated with low levels of educational achievement. Extremely rapid growth is most likely to characterize "boom" towns or some type of frontier settlement--both of which are likely to have grossly inferior schools. There are no convenient guidelines as to where "healthy" growth ends and too rapid growth begins.

Furthermore, the adjustment problems of some groups of children moving to metropolitan areas should be emphasized. The measure of relative progress in school used in Tables 1 and 2 was tabulated according to region of birth and residence in 1965 for black children living in metropolitan areas in the North and West in 1970 (Manpower Administration, U. S. Department of Labor, 1974). These data revealed what has been the accepted view, demonstrating that: (1) southern-born black children in metropolitan areas in the North and West were less likely to be enrolled in school and, among the enrolled, were more likely to be below the modal grade than nonmigrant black children in the region of destination; (2) southern-born black

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children who had lived in the North or West for at least five years were more likely to be enrolled and more likely to be at the modal grade than were more recent migrants; (3) black children moving from nonmetropolitan parts of the South were less likely to be enrolled and, among the enrolled, more likely to be below the modal grade than black children moving from metropolitan areas of the South. These data demonstrate further the utility of the measures used in Tables 1 and 2 and point out some of the exceptions to the general conclusion of this section.

IMPLICATIONS FOR THEORY AND FURTHER RESEARCH

This paper has examined only one aspect of the larger question involving the effects of moving on children's progress and performance in school. Except among children of college graduates, frequent long-distance movement was found to be associated with an increased likelihood of enrollment below the modal grade. But frequent short-distance movement may not have this apparent effect. Furthermore, some types of moves may affect children's progress and performance in school more than other types of moves. And all of these possible effects may vary according to the circumstances of the move, the socioeconomic status of the

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family, and the time of year when the move occurs. At present, there is not an adequate body of statistics to test for each of these considerations.

It should be noted, however, that in both short- and long-distance movement families act as if they felt that geographical mobility interfered with children's progress in school. Enrollment of the first child in school has been found to be an important barrier to a family's further residential mobility (Long, 1972). This finding applies regardless of the age of the family head or the distance of the move. The most probable explanation as to why families with school-age children are less residentially mobile than families without school-age children is simply that the children do not want to move because of their friendships in school and the parents may not want to move because of friendships formed around activities of their school-age children (PTA, Little League, etc.). But one cannot rule out the possibility that the residential mobility of families is influenced by what parents perceive to be the effects of mobility on children's progress and performance in school.

Although frequent long-distance migration is associated with failure of children to make average or above average progress in school, the specific mechanisms which bring about this result are not entirely clear. Long-distance moving obviously requires a child to adjust to new teachers, schools, and curricula, and regardless of previous performance a child who moves is likely to be asked to "catch up" in at least some subjects. Some children are likely to be unable to catch up by the time of final exams and as a result are retained in the same

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grade for the next year. Also, because of different state practices, the new school may not recognize credits granted by the old school, thereby retaining in the same grade or not permitting grade skipping among some of the children who are interstate migrants. Finally, any difficulties in making friends in a new school and a new area of the country are likely to affect adversely a child's academic performance.

We are also left with the question as to why these factors which could impede school performance might affect children of college graduates less than other children. The most probable answer is simply that parents who are college graduates are more accustomed to long-distance migration, having engaged in it more often than other parents and thereby more easily make adjustments and accommodations to moving. College graduates are likely to have made long-distance moves as children and as a result of leaving home to attend college, and throughout life they are more likely to engage in migration than other persons (Long, 1973). When interstate moves occur, college-educated parents are more likely to know what to expect and how to ease their children's transition to a new school in a different area. Also, because the circle of friends among college graduates is less likely to consist of the immediate kin network and is more likely to consist of other college graduates, children of college graduates are likely to have continuing exposure to other people's mobility and as a result be less unsettled by their own mobility.

Previous research has been more successful in identifying the benefits of migration than the costs, for it is in some ways easier to conceptualize and measure the benefits or rewards of migration than the costs. For example, one can simply compute the discounted rate of return to migration

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by calculating expected lifetime income of migrants and nonmigrants; such calculations (Wertheimer, 1970) show a decided income advantage for migrants. In addition, Blau and Duncan (1967:250) concluded that "men who live outside the region of their birth tend to achieve higher occupational status than those who have remained in it."

In terms of income and occupational advancement, migration clearly "pays" for most individuals. The costs of migration are likely to fall on children, on wives whose careers are disrupted by the migration of their husbands, on those areas of origin which lose talented people through migration, and on selected areas of destination which must bear the costs of school construction. Careful quantifying of each of these costs is a task for further research.

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REFERENCES

Barrett, Curtis L., and Helen Noble.

1973 "Mothers' anxieties versus the effects of long distance move on children." Journal of Marriage and the Family 35 (May):181-188.

Blau, Peter M., and Otis Dudley Duncan.

1967 The American Occupational Structure. New York: John Wiley and Sons, Inc.

Coleman, James S., Ernest Q. Campbell, Carol Hobson, James McPartland, Alexander M. Mood, Frederic D. Weinfield, and Robert L. York.

1966 Equality of Educational Opportunity. Washington, D. C.: U. S. Government Printing Office.

Conlisk, John.

1969 "Determinants of school enrollment and school performance." Journal of Human Resources 4 (Spring):141-157.

Folger, John K., and Charles B. Nam.

1967 Education of the American Population. Washington, D. C.: U. S. Government Printing Office.

Long, Larry H.

1972 "The influence of number and ages of children on residential mobility." Demography 9 (August):371-382.

1973 "Migration differentials by education and occupation: trends and variations." Demography 10 (May):243-258.

Manpower Administration, U. S. Department of Labor.

1974 Manpower Report of the President. Washington, D. C.: U. S. Government Printing Office.

BEST COPY AVAILABLE

Masters, Stanley H.

1969 "The effect of family income on children's education: some findings on inequality of opportunity." Journal of Human Resources 4 (Spring):158-175.

Packard, Vance.

1972 A Nation of Strangers. New York: David McKay Company, Inc.

U. S. Bureau of the Census.

1972 Current Population Reports, Series P-20, No. 241, "Social and Economic Characteristics of Students: October 1971." Washington, D. C.: U. S. Government Printing Office.

1973a Census of Population: 1970. Subject Reports. Final Report PC(2)-2B, Mobility for States and the Nation. Washington, D. C.: U. S. Government Printing Office.

1973b Census of Population: 1970. Subject Reports. Final Report PC(2)-2D, Lifetime and Recent Migration. Washington, D. C.: U. S. Government Printing Office.

1973c Census of Population: 1970. Subject Reports. Final Report PC(2)-5A, School Enrollment. Washington, D. C.: U. S. Government Printing Office.

U. S. National Center for Health Statistics.

1971a School Achievement of Children by Demographic and Socioeconomic Factors. Washington, D. C.: U. S. Government Printing Office.

1971b Intellectual Development of Children by Demographic and Socioeconomic Factors. Washington, D. C.: U. S. Government Printing Office.

U. S. Office of Education.

1971 Pupil Mobility in Public Elementary and Secondary Schools during

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the 1968-69 School Year. By A. Stafford Metz. Washington, D. C.: U. S. Government Printing Office.

1973 Pupil Mobility in Public Elementary and Secondary Schools during the 1969-70 School Year. By A. Stafford Metz. Washington, D. C.: U. S. Government Printing Office.

Wertheimer, Richard F.

1970 The Monetary Rewards of Migration within the U. S. Washington, D. C.: The Urban Institute.

Wolfle, Dael.

1971 The Uses of Talent. Princeton: Princeton University Press.

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Table 1. CHILDREN 8 TO 17 YEARS OLD--PERCENT ENROLLED IN SCHOOL AND PERCENT ENROLLED AT, ABOVE, AND BELOW MODAL GRADE FOR AGE, ACCORDING TO AGE, WHETHER LIVING WITH BOTH PARENTS, AND NUMBER OF STATES LIVED IN: APRIL 1970

	Total number (000's)	Percent enrolled	Percent of enrolled: Below mode for age	At mode for age	Above mode for age
LIVING WITH BOTH PARENTS					
Children 8 to 11 years old					
Lived in one state.....	10,275	98.2	14.4	69.6	16.1
Lived in two states.....	1,951	98.4	14.6	70.6	14.8
Lived in three or more states...	372	99.0	13.2	72.7	14.1
Children 12 to 15 years old					
Lived in one state.....	9,887	97.5	17.3	66.3	16.4
Lived in two states.....	2,051	97.8	16.9	67.6	15.5
Lived in three or more states...	327	98.3	15.4	70.1	14.5
Children 16 and 17 years old					
Lived in one state.....	3,296	92.8	18.9	69.4	11.7
Lived in two states.....	704	93.3	18.5	70.3	11.2
Lived in three or more states...	91	94.5	16.8	72.5	10.8
OTHER CHILDREN IN FAMILIES					
Children 8 to 11 years old					
Lived in one state.....	1,833	95.6	20.6	59.5	19.9
Lived in two states.....	370	94.8	19.6	62.8	17.6
Lived in three or more states...	53	95.4	17.0	66.1	16.9
Children 12 to 15 years old					
Lived in one state.....	1,967	94.0	26.3	56.0	17.7
Lived in two states.....	448	93.5	24.3	58.7	17.0
Lived in three or more states...	50	94.6	20.7	62.2	17.1
Children 16 and 17 years old					
Lived in one state.....	1,755	81.9	21.5	65.5	13.0
Lived in two states.....	393	82.3	20.8	66.7	12.5
Lived in three or more states...	39	83.9	18.7	70.2	11.2

Source: 1970 Census of Population, Lifetime and Recent Migration, Table 6.

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Table 2. CHILDREN 8 TO 17 YEARS OLD LIVING WITH BOTH PARENTS--PERCENT ENROLLED BELOW MODAL GRADE FOR AGE AND PERCENT ENROLLED ABOVE MODAL GRADE FOR AGE, ACCORDING TO AGE, FATHER'S EDUCATION, AND NUMBER OF STATES LIVED IN: APRIL 1970

	Father not a high school graduate	Father a high school graduate	Father with one to three years of college	Father with four or more years of college
PERCENT OF CHILDREN ENROLLED BELOW MODE FOR AGE				
Children 8 to 11 years old				
Lived in one state.....	20.7	11.2	9.5	6.9
Lived in two states.....	24.2	13.9	10.8	6.6
Lived in three or more states...	24.8	14.6	10.9	6.8
Children 12 to 15 years old				
Lived in one state.....	24.3	12.3	10.4	7.5
Lived in two states.....	27.8	15.2	11.8	7.4
Lived in three or more states...	29.0	18.0	13.6	7.7
Children 16 and 17 years old				
Lived in one state.....	26.4	13.8	12.3	9.0
Lived in two states.....	29.6	16.4	14.0	9.2
Lived in three or more states...	29.9	19.6	15.3	10.3
PERCENT OF CHILDREN ENROLLED ABOVE MODE FOR AGE				
Children 8 to 11 years old				
Lived in one state.....	15.8	15.9	16.3	17.1
Lived in two states.....	13.3	14.4	15.6	16.3
Lived in three or more states...	11.9	12.8	14.9	15.8
Children 12 to 15 years old				
Lived in one state.....	14.9	17.0	17.9	18.8
Lived in two states.....	13.1	15.5	16.5	18.1
Lived in three or more states...	11.4	13.1	15.2	16.8
Children 16 and 17 years old				
Lived in one state.....	10.4	12.3	13.1	13.9
Lived in two states.....	9.3	11.3	12.1	13.1
Lived in three or more states...	8.1	9.8	10.6	12.6

Source: 1970 Census of Population, Lifetime and Recent Migration, Table 6.

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Table 3. CHILDREN 6 TO 11 YEARS OLD IN SCHOOL--IQ AND ACHIEVEMENT TEST SCORES ACCORDING TO 1950-60 POPULATION CHANGE IN PLACE OF RESIDENCE: 1963-65

	Rate of population change:			
	Loss	Below average gain	Average gain	Above average gain
	IQ SCORE (WECHSLER INTELLIGENCE SCALE)			
6 years old.....	98.9	99.3	98.2	104.8
7 years old.....	98.5	99.5	98.3	104.4
8 years old.....	99.2	98.4	98.5	103.8
9 years old.....	97.4	100.4	98.6	104.5
10 years old.....	97.8	100.6	96.5	105.4
11 years old.....	96.7	100.3	98.1	105.6
	READING RAW SCORE ON WIDE RANGE ACHIEVEMENT TEST			
6 years old.....	24.1	26.0	26.2	26.7
7 years old.....	39.2	41.2	41.8	43.5
8 years old.....	51.3	52.4	51.9	53.7
9 years old.....	55.4	59.8	58.9	60.7
10 years old.....	62.2	64.7	63.2	67.3
11 years old.....	66.2	69.9	69.2	72.5
	ARITHMETIC RAW SCORE ON WIDE RANGE ACHIEVEMENT TEST			
6 years old.....	16.4	16.5	16.9	17.9
7 years old.....	21.1	22.0	22.3	22.8
8 years old.....	25.4	26.6	26.4	26.3
9 years old.....	28.6	29.6	29.7	30.1
10 years old.....	31.9	33.3	32.7	33.8
11 years old.....	36.3	37.3	37.6	38.7

Source: National Center for Health Statistics, Intellectual Development of Children by Demographic and Socioeconomic Factors, Table 20; and School Achievement of Children by Demographic and Socioeconomic Factors, Table 23.